

## **Amendments to the Claims:**

Claims 1-37 and 43-55, currently pending in this application, are reproduced as follows:

- 1                   1. (previously presented) A communication system comprising:  
2                   a plurality of subscriber units, each subscriber unit sending and  
3                   receiving information packets using a wireless communication link;  
4                   a plurality of access points, each access point forming a coverage area  
5                   for exchanging information packets with subscriber units within the coverage area  
6                   through at least one wireless communication link; and  
7                   a plurality of distribution points, each distribution point in  
8                   communication with at least one access point and with at least one additional  
9                   distribution point, each distribution point operative to  
10                  (a)       receive an information packet for distribution to a destination  
11                   within the communication system,  
12                  (b)       determine if the information packet destination is to one of the  
13                   plurality of subscriber units within the coverage area of an  
14                   access point in communication with the distribution point,  
15                  (c)       forward the information packet to the access point defining the  
16                   coverage area containing the subscriber unit if the information  
17                   packet destination is to one of the plurality of subscriber units  
18                   within the coverage area of the access point in communication  
19                   with the distribution point, and  
20                  (d)       forward the information packet to one of the additional  
21                   distribution points in communication with the distribution  
22                   point if the information packet destination is not to one of the  
23                   plurality of subscriber units within the coverage area of the  
24                   access point in communication with the distribution point.

1                   2. (previously presented) The communication system of claim 1  
2     wherein each information packet includes at least one of voice, video, and data  
3     information.

1                   3. (previously presented) The communication system of claim 1  
2     wherein at least one ~~an~~ information packet comprises voice information.

1                   4. (previously presented) The communication system of claim 1  
2     wherein at least one ~~an~~ information packet comprises video information.

1                   5. (previously presented) The communication system of claim 1  
2     wherein at least one ~~an~~ information packet comprises data.

1                   6. (previously presented) The communication system of claim 1  
2     wherein at least one ~~an~~ information packet comprises streaming audio.

1                   7. (previously presented) The communication system of claim 1  
2     wherein at least one ~~an~~ information packet comprises streaming video.

1                   8. (previously presented) The communication system of claim 1  
2     wherein the communication link is a symmetric link.

1                   9. (previously presented) The communication system of claim 1  
2     wherein the communication link is an asymmetric link.

3                   10. (previously presented) The communication system of claim 1  
4     wherein each distribution point is in wireless communication with at least one of the  
5     at least one access point.

6                   11. (previously presented) The communication system of claim 1  
7    wherein at least one distribution point is in wireline communication with at least one  
8    of the at least one access point.

9                   12. (previously presented) The communication system of claim 1  
10   wherein at least one of the at least one access point is packaged with a distribution  
11   point.

12                  13. (previously presented) The communication system of claim 1  
13   wherein at least one of the plurality of access points is not collocated with any  
14   distribution point.

1                   14. (previously presented) The communication system of claim 1  
2    wherein at least one of the plurality of distribution points is in wireless  
3    communication with at least one additional distribution point of the plurality of  
4    distribution points.

1                   15. (previously presented) The communication system of claim 1  
2    wherein the plurality of distribution points forms a wireless network of distribution  
3    points.

1                   16. (previously presented) The communication system of claim 1  
2    further comprising a communication system interface device operative to format  
3    information contained in the information packet to pass through a second  
4    communication system, the distribution point further operative to receive an  
5    information packet for distribution within the second communication system and to  
6    send the information packet to the communication system interface device.

1                   17. (previously presented) The communication system of claim 16  
2    wherein the second communication system comprises a wireless telecommunication  
3    system.

1                   18. (previously presented) The communication system of claim 16  
2    wherein the second communication system comprises a wireline telecommunication  
3    system.

1                   19. (previously presented) The communication system of claim 16  
2    wherein the second communication system comprises a data network.

1                   20. (previously presented) The communication system of claim 16  
2    wherein the second communication system comprises a video distribution system.

1                   21. (previously presented) The communication system of claim 1  
2    further comprising a telecommunication system interface device operative to format  
3    information contained in the information packet to pass through a telecommunication  
4    system, the distribution point further operative to:  
5                    receive at least one information packet from the telecommunication  
6    system interface device;  
7                    determine if the at least one information packet destination is to a  
8    subscriber unit within the coverage area of an access point in communication with the  
9    distribution point;  
10                  forward the at least one information packet to the access point defining  
11   the coverage area containing the subscriber unit if the information packet destination  
12   is to a subscriber unit within the coverage area of the access point in communication  
13   with the distribution point; and  
14                  forward the at least one information packet to one of the additional  
15   distribution points in communication with the distribution point if the information

16 packet destination is not to a subscriber unit within the coverage area of the access  
17 point in communication with the distribution point.

1 22. (previously presented) The communication system of claim 1  
2 wherein at least one distribution point in the plurality of distribution points is further  
3 in communication with an Internet gateway, the distribution point further operative  
4 to exchange packets with the Internet gateway.

1 23. (previously presented) The communication system of claim 1  
2 wherein at least one distribution point in the plurality of distribution points comprises  
3 an asynchronous transfer mode switch.

1 24. (previously presented) The communication system of claim 1  
2 wherein at least one distribution point in the plurality of distribution points comprises  
3 an Internet protocol router.

1 25. (previously presented) The communication system of claim 1  
2 wherein at least one distribution point in the plurality of distribution points comprises  
3 an Ethernet router.

1 26. (previously presented) The communication system of claim 1  
2 wherein at least one distribution point in the plurality of distribution points comprises  
3 a TDM switch.

1 27. (previously presented) The communication system of claim 1  
2 wherein each subscriber unit of the plurality of subscriber units is autonomously  
3 registered when the subscriber unit first enters the coverage area of a radio access  
4 point within the communication system.

1                   28. (previously presented) The communication system of claim 27  
2    wherein each subscriber unit of the plurality of subscriber units maintains registration  
3    as the subscriber unit moves from one coverage area into another coverage area.

1                   29. (previously presented) The communication system of claim 27  
2    wherein each subscriber unit of the plurality of subscriber units is autonomously  
3    deregistered when the subscriber unit leaves the communication system.

1                   30. (previously presented) The communication system of claim 1  
2    wherein a quality error bit rate is established for each subscriber unit based on the  
3    location of the subscriber unit within the communication system.

4                   31. (previously presented) The communication system of claim 1  
5    wherein a quality error bit rate is established for each subscriber unit based on a class  
6    of service.

7                   32. (previously presented) The communication system of claim 1  
8    wherein a quality error bit rate is established for each subscriber unit based on a  
9    grade of service.

10                  33. (previously presented) The communication system of claim 1  
11    wherein a quality error bit rate is established for each subscriber unit based on a rate  
12    of service.

1                   34. (previously presented) The communication system of claim 1  
2    wherein the subscriber unit is a fixed device.

1                   35. (previously presented) The communication system of claim 1  
2    wherein the subscriber unit is a non-fixed device.

1                   36. (previously presented) The communication system of claim 1  
2 wherein the distribution point dynamically allocates bandwidth when the information  
3 packet is forwarded to one of the additional distribution points in communication with  
4 the distribution point.

1                   37. (previously presented) The communication system of claim 1  
2 wherein bandwidth is dynamically allocated when an information packet is  
3 exchanged between one of the plurality of subscriber units and one of the plurality  
4 of access points.

1                   38.-42. (canceled) .

1                   43. (previously presented) A communication system comprising:  
2 a plurality of distribution points, each distribution point in  
3 communication with at least one additional distribution point in the plurality of  
4 distribution points, each distribution point operative to rout information packets;  
5 a plurality of subscriber units, each subscriber unit operative to  
6 communicate information packets to a destination subscriber unit through at least one  
7 distribution point in the plurality of distribution points; and  
8 a supervisor in communication with each distribution point, the  
9 supervisor operative to identify the distribution point with which each subscriber unit  
10 is communicating and to provide each distribution point with a listing of to which of  
11 the at least one additional distribution point in communication with the distribution  
12 point information packets should be forwarded for each possible destination  
13 distribution point, the listing based on maintaining a minimum quality of service in  
14 a path to the destination distribution point.

1                   44. (previously presented) A communication system comprising:  
2 a plurality of distribution points, each distribution point in  
3 communication with at least one additional distribution point in the plurality of

4 distribution points, each distribution point operative to forward each information  
5 packet received by the distribution point to another distribution point based on a  
6 destination address in the packet and on a logical address of each of the plurality of  
7 distribution points; and

8 a supervisor in communication with each distribution point, the  
9 supervisor operative to provide each distribution point with a listing of to which of  
10 the at least one additional distribution point in communication with the distribution  
11 point information packets should be forwarded for each possible destination  
12 distribution point, the listing based on maintaining a minimum quality of service in  
13 a path to the destination distribution point.

1 45. (previously presented) A method of automatically adding a new  
2 distribution point into a network of existing distribution points, each distribution  
3 point in the network of existing distribution points in communication with at least one  
4 additional distribution point in the network of existing distribution points, each  
5 distribution point in the network of existing distribution points operative to forward  
6 an information packet to one of the additional distribution points in the network of  
7 existing distribution points in communication with the distribution point in the  
8 network of existing distribution points based on a destination address in the  
9 information packet, the method comprising:

10 transmitting a sign-on signal from the new distribution point;

11 receiving the sign-on signal in at least one distribution point in the  
12 network of existing distribution points;

13 assigning a routing address to the new distribution point; and

14 providing each distribution point in the network of existing distribution  
15 points with an indication as to which additional distribution point in the network of  
16 existing distribution points each information packet having a destination address  
17 specifying the new distribution point is to be forwarded.



1                   46. (previously presented) A method of automatically removing a  
2     distribution point from a network of distribution points, each distribution point in the  
3     network of distribution points in communication with at least one additional  
4     distribution point, each distribution point operative to forward an information packet  
5     to one of the additional distribution points in communication with the distribution  
6     point based on a destination address in the information packet, the method  
7     comprising:

8                   detecting the absence of signal from a distribution point to be removed  
9     from the network;

10                  determining a connectivity between distribution points remaining after  
11     removing the distribution point detected with the absence of signal; and

12                  providing each remaining distribution point with an indication as to  
13     which distribution point in communication with the remaining distribution point each  
14     information packet having a destination address specifying the remaining distribution  
15     point is to be forwarded.

1                   47. (previously presented) A distribution point for use in a  
2     communication system comprising a plurality of networked distribution points, the  
3     distribution point comprising:

4                   at least one front end communication interface, each front end interface  
5     in communication with an access point, the access point in wireless communication  
6     with subscriber units currently assigned to the distribution point;

7                   at least one back end communication interfaces, each back end  
8     interface in communication with a back haul communication device, at least one back  
9     haul communication device transferring packets with a back haul communication  
10     device in another of the plurality of networked distribution points; and

11                  an intelligent packet switching device operative to

12                  (a)     determine a destination for each received packet,

13                  (b)     determine if the destination is to a subscriber unit currently  
14                           assigned to the distribution point,

- 15                   (c)     send the packet to the subscriber unit if the subscriber unit is  
16                               currently assigned to the distribution point,  
17                   (d)     if the destination is not to a subscriber unit currently assigned  
18                               to the distribution point, determine if the destination is to a  
19                               subscriber unit currently assigned to any other distribution  
20                               point in the communication system, and  
21                   (e)     if the subscriber unit is currently assigned to any other  
22                               distribution point in the communication system, identify  
23                               another distribution point in back haul communication with the  
24                               distribution point to which the packet should be forwarded and  
25                               forward the packet to the identified distribution point.

1                   48. (previously presented) The distribution point as in claim 47  
2 wherein at least one front end communication interface is connected to an antenna,  
3 thereby permitting the distribution point to be in wireless communication with at least  
4 one radio access point.

1                   49. (previously presented) The distribution point as in claim 47  
2 wherein at least one front end communication interface is in wireline connection with  
3 a radio access point.

1                   50. (previously presented) The distribution point as in claim 47  
2 wherein transferring packets between a back haul communication device within the  
3 distribution point and a back haul communication device in another of the plurality  
4 of networked distribution points is a wireless transfer.

1                   51. (previously presented) The distribution point as in claim 47  
2 wherein transferring packets between a back haul communication device within the  
3 distribution point and a back haul communication device in another of the plurality  
4 of networked distribution points is through a wireline connection.

1                   52. (previously presented) The distribution point as in claim 47  
2 wherein the intelligent packet switching device comprises an asynchronous transfer  
3 mode switch.

1                   53. (previously presented) The distribution point as in claim 47  
2 wherein the intelligent packet switching device comprises an Internet protocol router.

1                   54. (previously presented) The distribution point as in claim 47  
2 wherein the intelligent packet switching device comprises an Ethernet router.

1                   55. (previously presented) The distribution point as in claim 47  
2 wherein the intelligent packet switching device comprises a TDM switch.